AMENDMENTS TO THE CLAIMS

1. (Original) A method for separation of CO_2 from the combustion gas from a thermal power plant fired with fossil fuel, the method comprising the following steps;

a) cooling and mixing the combustion gas from the thermal power plant with air;

b) compressing the combustion gas – air mixture;

c) reheating the compressed gas from step b) by using it as an oxygen containing gas for combustion of natural gas in a pressurized combustion chamber to form an exhaust gas;

d) regulating the supply of natural gas and oxygen containing gas in the combustion chamber so that the exhaust gas contains less than 6 % rest oxygen;

e) keeping the temperature in the exhaust gas between 700 and 900 °C by generation of steam in tubular coils in the combustion chamber;

f) cooling the the exhaust gas and bringing it in contact with an absorbent absorbing CO_2 from the exhaust gas to form a low CO_2 stream and an absorbent with absorbed CO_2;

g) heating the low CO_2 stream by means of heat exchanges against the hot exhaust gas leaving the combustion chamber; and

h) expanding the heated low CO_2 stream in turbines.

2. (Original) The method according to claim 1, wherein the absorbent used in step f) with absorbed CO_2 is regenerated to form a CO_2 rich stream and regenerated absorbent.

3. (Currently Amended) The method of ~~claim 1 or 2~~ claim 1, wherein the steam generated for cooling the pressurized combustion chamber in step e) is expanded in turbines to generate power.

4. (Original) A separation plant for separation of the combustion gas from a thermal power plant (100) into a CO_2 poor stream and a CO_2 rich stream, the plant comprising an air / combustion gas mixer, a combustion chamber (6) for further combustion of the mixture of air and combustion gas from the power plant (100), a supply line (9) for supply of hydrocarbon fuel to the combustion chamber (6), means for cooling the exhaust gas from the combustion chamber (6), a contact device (13) for bringing the cooled exhaust gas in contact with an absorbent for absorption of CO_2 where a CO_2 poor stream, that is released into the atmosphere, is generated, a regeneration loop (19, 18, 43, 20) for regeneration of the absorbent and generation of a CO_2 rich stream, and an associated power plant producing power from the heat produced in the combustion chamber (6).

5. (Original) Plant according to claim 4, additionally compressor(s) (2, 2') for compressing the combustion gas from the power plant (100) and turbine(s) (15, 15') for expansion of the CO_2 poor stream before it is released into the atmosphere.

6. (Original) Plant according to claim 4, additionally comprising heat exchangers (11, 8) for heating the CO_2 poor stream by heat exchanging against the exhaust gas from the combustion chamber (6) before the CO_2 poor stream is expanded over turbine(s) (15, 15').

7. (Currently Amended) Plant according to ~~any of the claims 4 to 6~~ claim 4, additionally comprising lines (82, 83, 85, 87) for transferring heat as hot water or steam between the power plant and the separation plant.

8. (Original) A combined thermal power plant and separation plant for separation of the combustion gas from the thermal power plant in a CO_2 rich and a CO_2 poor fraction, comprising a thermal power plant fired by carbon or a hydrocarbon and a separation plant according to claim 5.

9. (Original) A combined plant according to claim 8, wherein the power plant is fired by a hydrocarbon, preferably by natural gas.

10. (New) The method of claim 2, wherein the steam generated for cooling the pressurized combustion chamber in step e) is expanded in turbines to generate power.

11. (New) Plant according to claim 5, additionally comprising lines (82, 83, 85, 87) for transferring heat as hot water or steam between the power plant and the separation plant.

12. (New) Plant according to claim 6, additionally comprising lines (82, 83, 85, 87) for transferring heat as hot water or steam between the power plant and the separation plant.